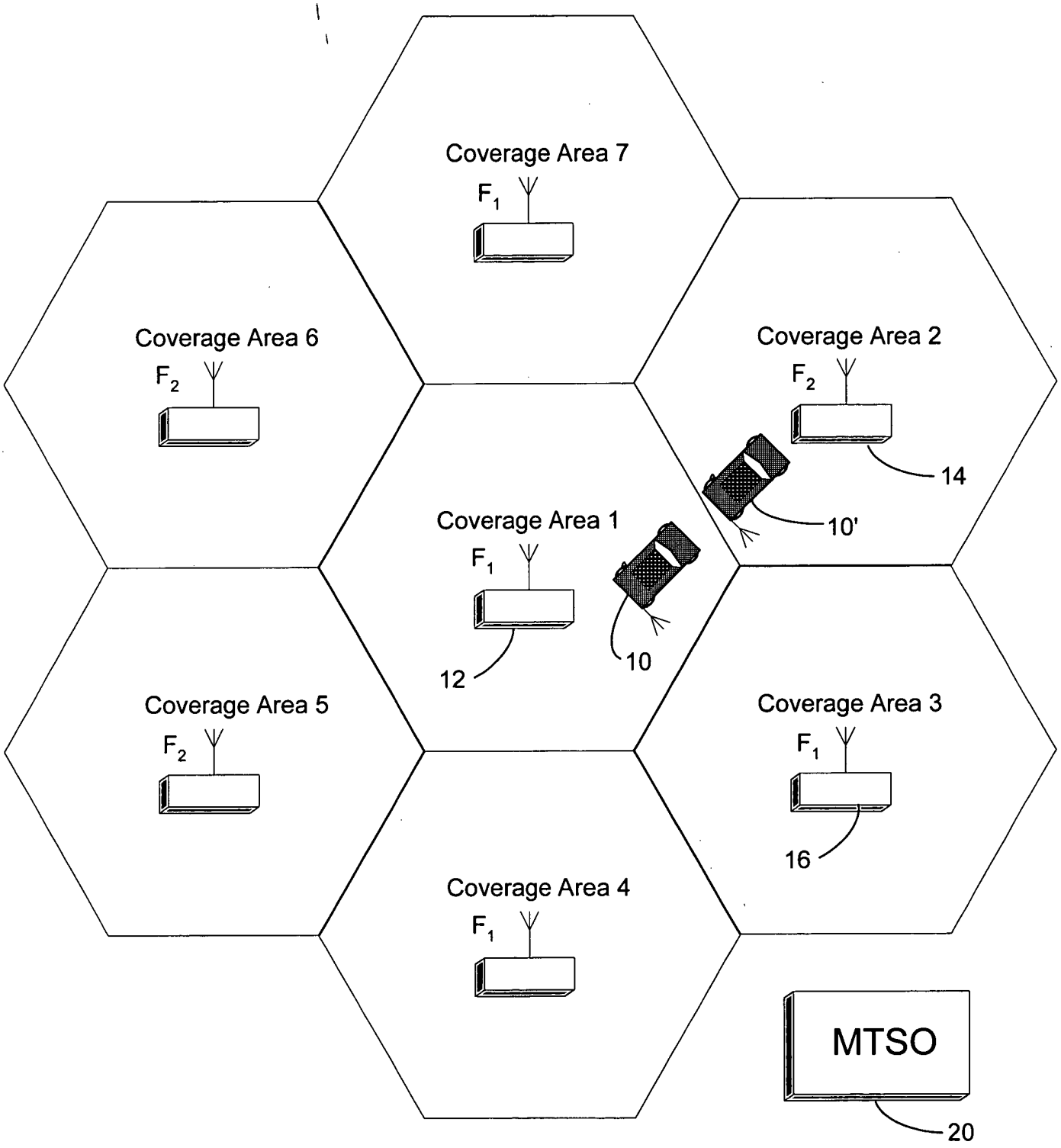


Service Area

FIGURE 1

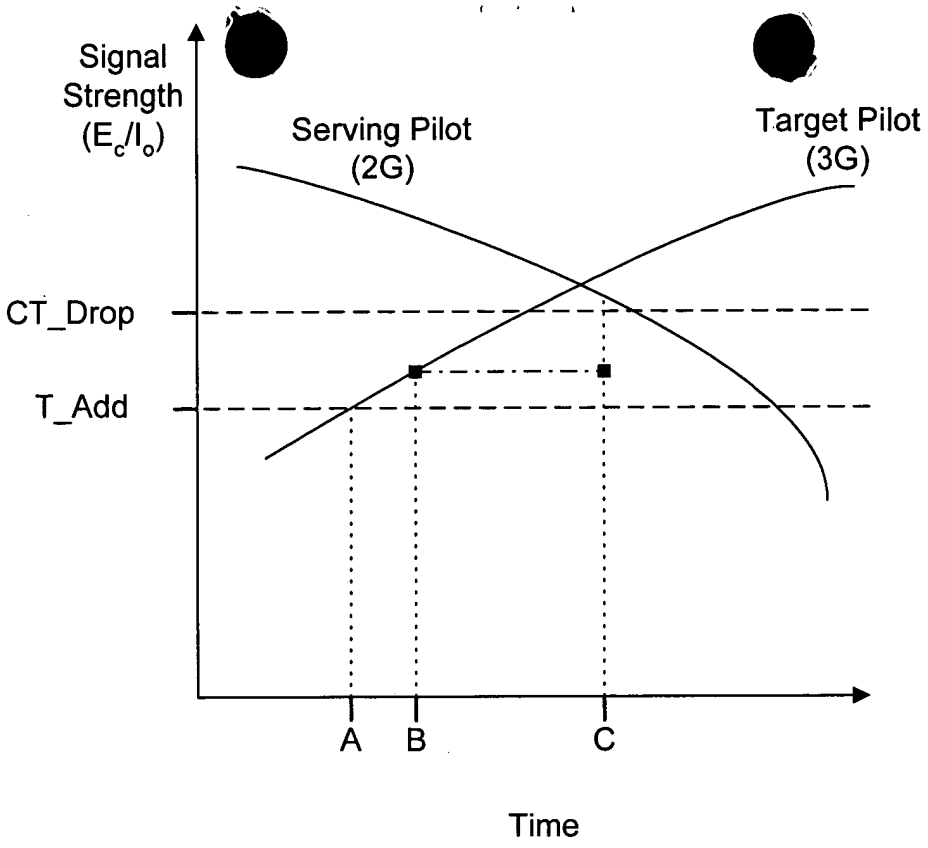


FIGURE 2

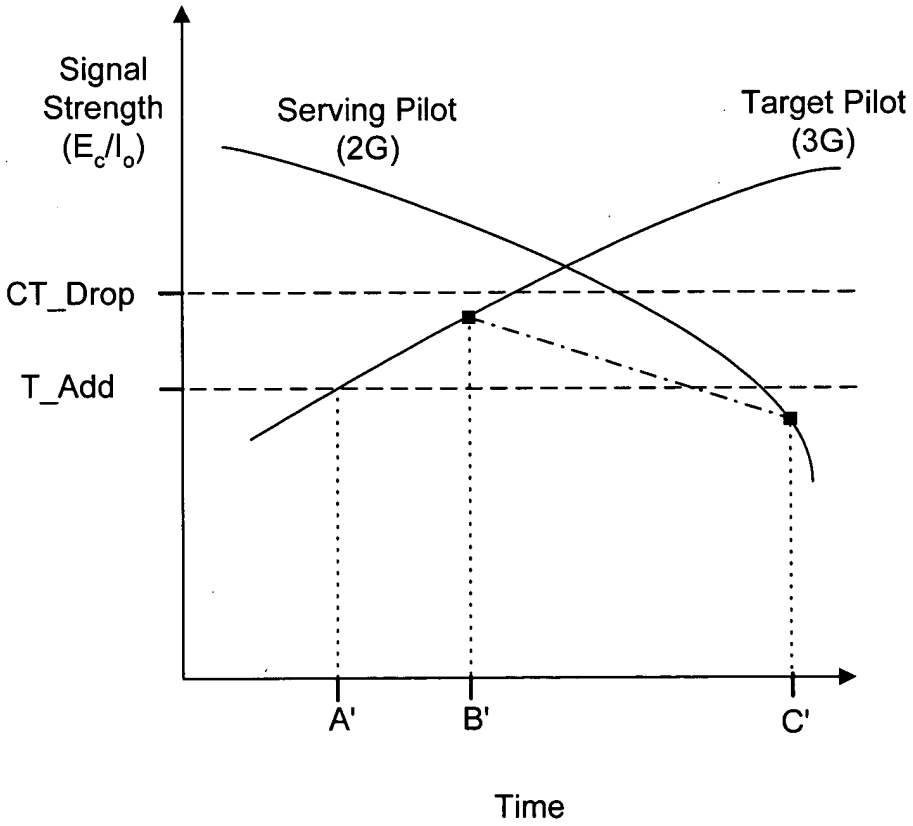


FIGURE 3

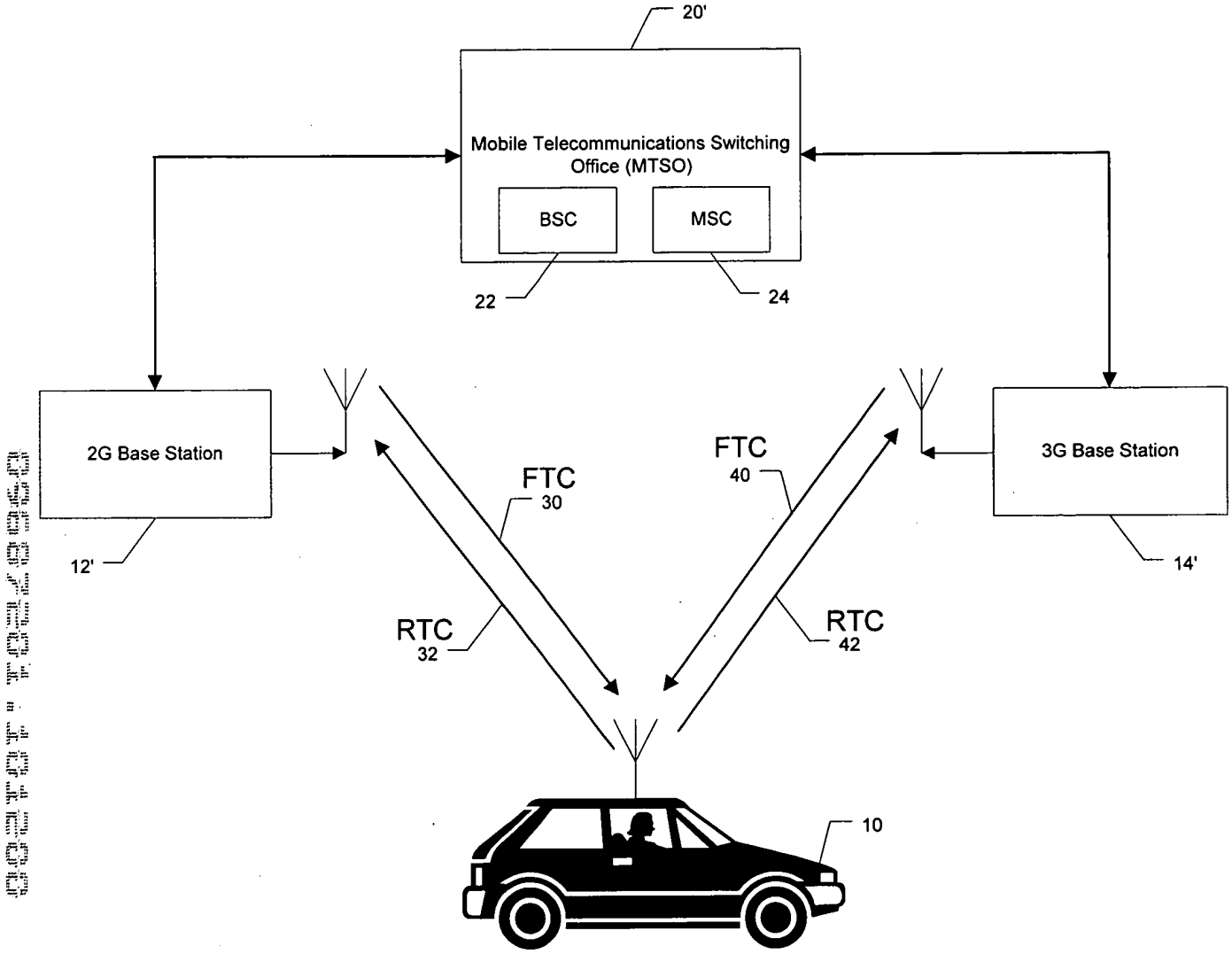
20'
Mobile Telecommunications Switching Office (MTSO)
BSC
MSC
22
24
2G Base Station
12'
3G Base Station
14'
FTC
30
FTC
40
RTC
32
RTC
42
10
Mobile Station

FIGURE 4

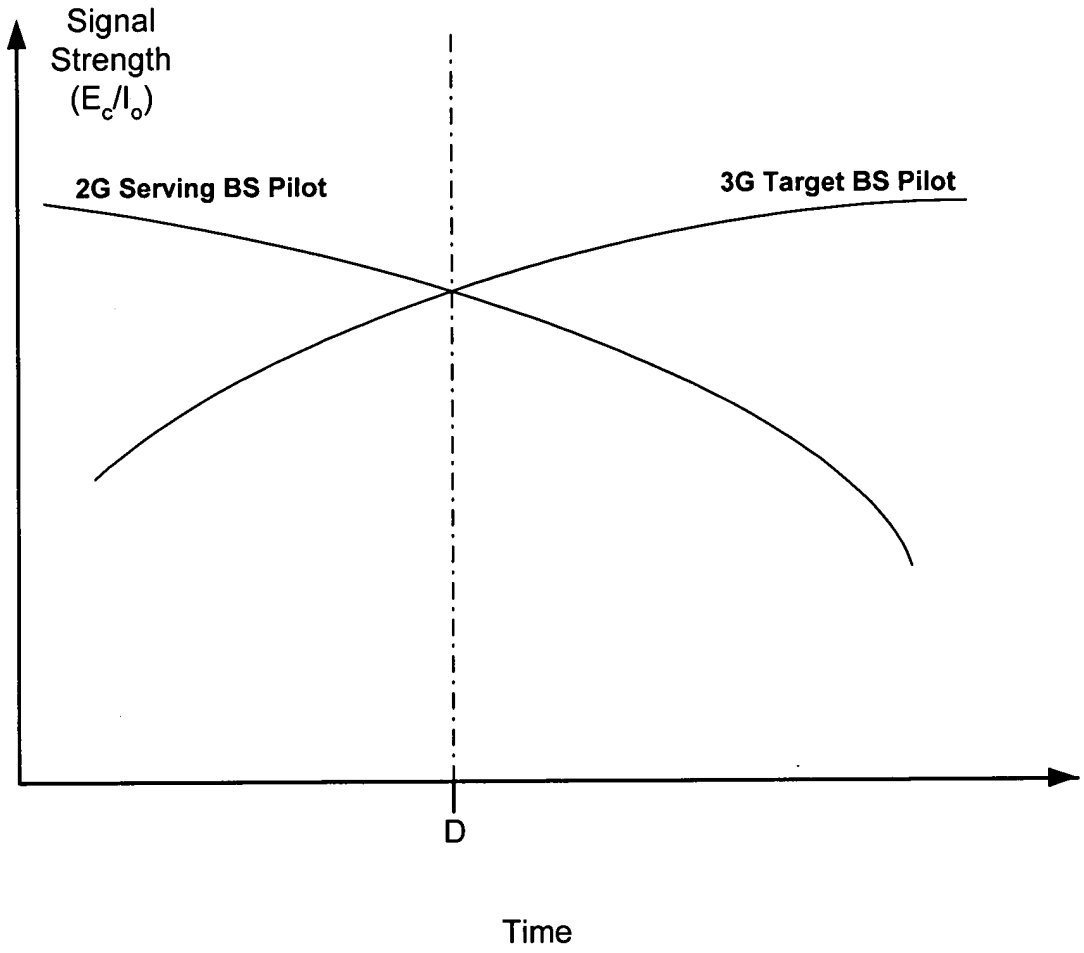
Signal
Strength
($E_c/I_o$)
2G Serving BS Pilot
3G Target BS Pilot
D
Time

FIGURE 5

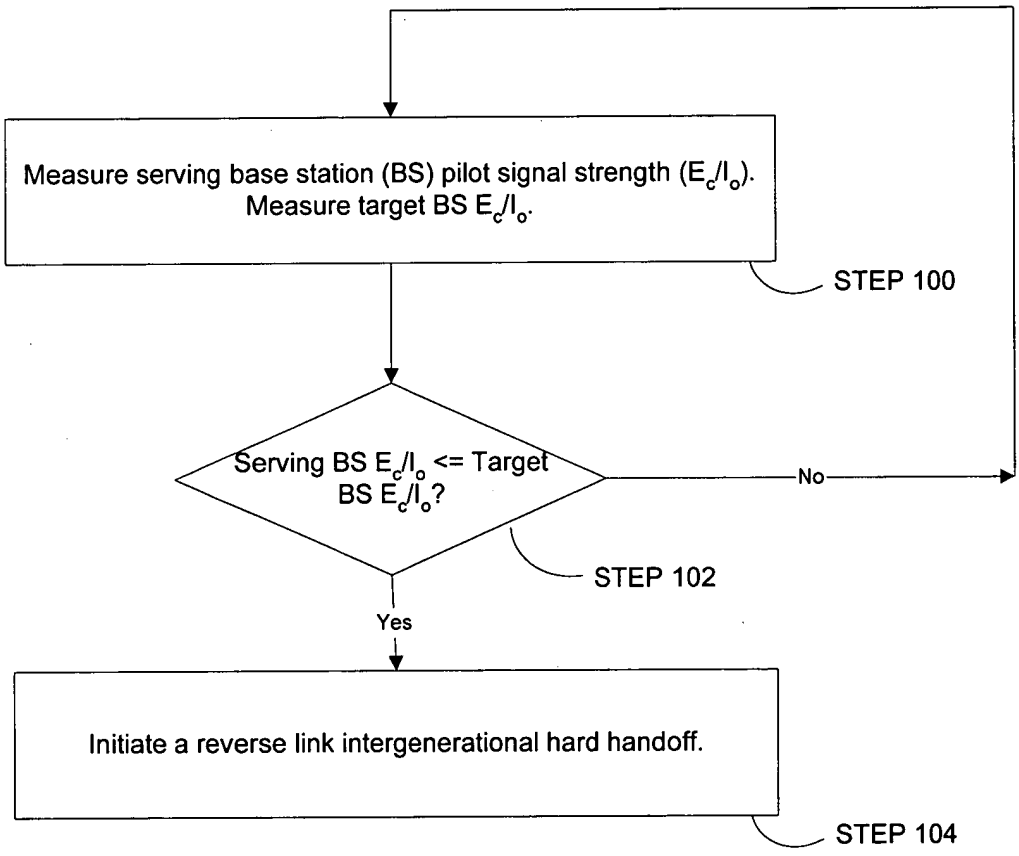
Measure serving base station (BS) pilot signal strength ($E_c/I_o$).
Measure target BS $E_c/I_o$.
STEP 100
Serving BS $E_c/I_o$ <= Target BS $E_c/I_o$?
No
STEP 102
Yes
Initiate a reverse link intergenerational hard handoff.
STEP 104

FIGURE 6a

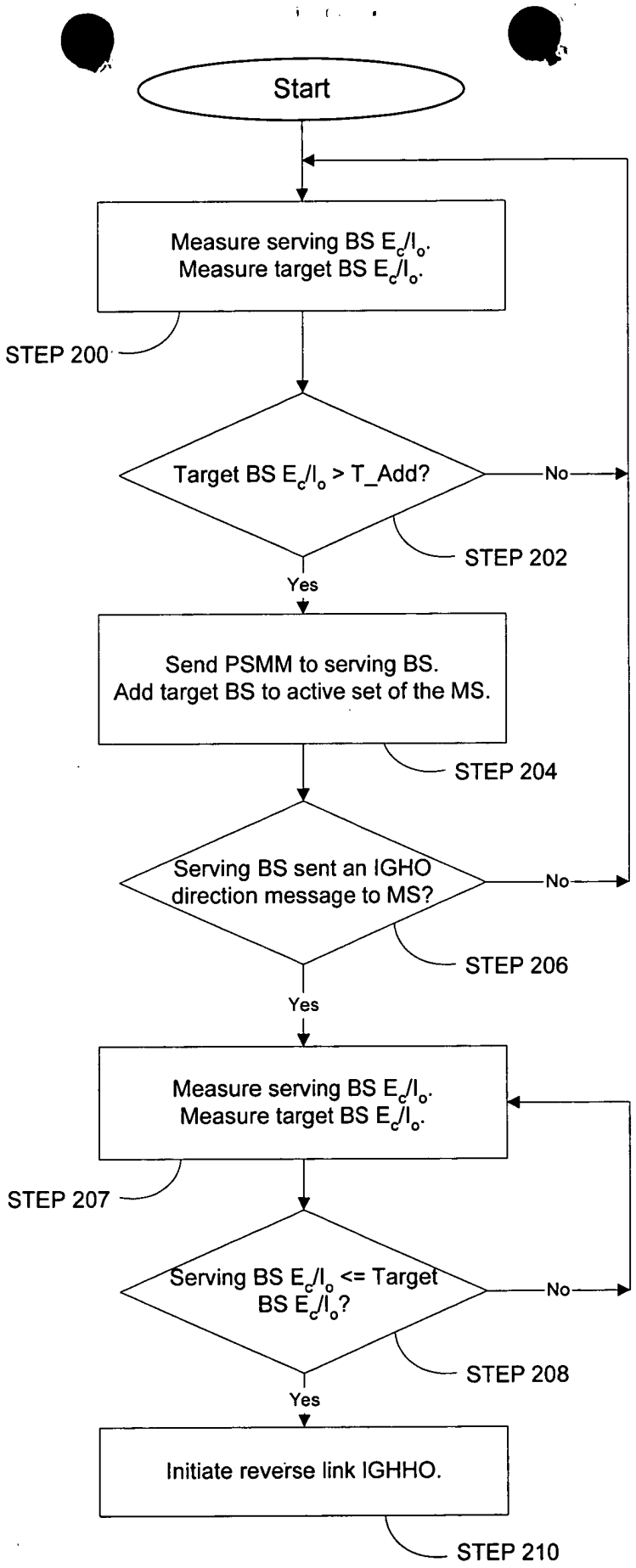
Start
Measure serving BS $E_c/I_o$.
Measure target BS $E_c/I_o$.
STEP 200
Target BS $E_c/I_o$ > T_Add?
No
STEP 202
Yes
Send PSMM to serving BS.
Add target BS to active set of the MS.
STEP 204
Serving BS sent an IGHO direction message to MS?
No
STEP 206
Yes
Measure serving BS $E_c/I_o$.
Measure target BS $E_c/I_o$.
STEP 207
Serving BS $E_c/I_o$ <= Target BS $E_c/I_o$?
No
STEP 208
Yes
Initiate reverse link IGHHO.
STEP 210

FIGURE 6b

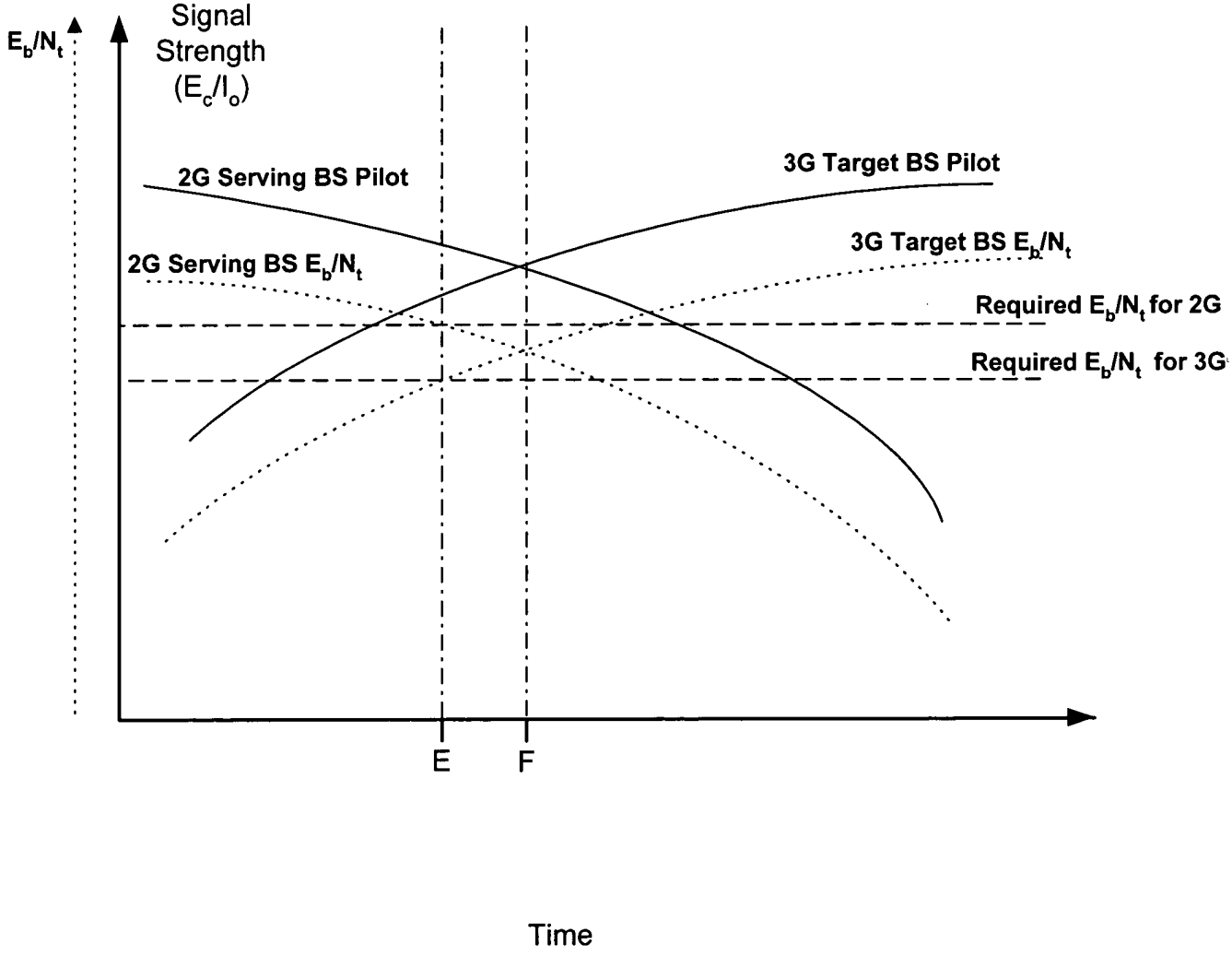
$E_b/N_t$
Signal Strength ($E_c/I_o$)
2G Serving BS Pilot
3G Target BS Pilot
2G Serving BS $E_b/N_t$
3G Target BS $E_b/N_t$
Required $E_b/N_t$ for 2G
Required $E_b/N_t$ for 3G
E
F
Time

FIGURE 7

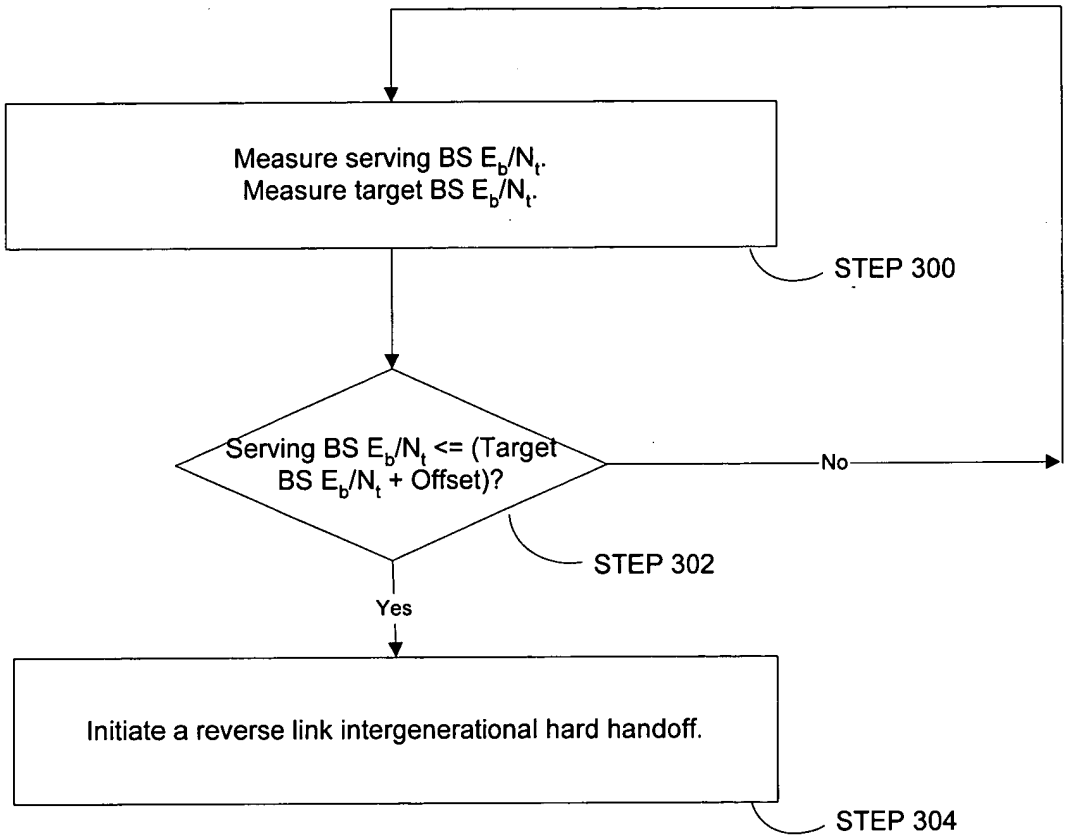
Measure serving BS $E_b/N_t$.
Measure target BS $E_b/N_t$.
STEP 300
Serving BS $E_b/N_t$ <= (Target BS $E_b/N_t$ + Offset)?
No
STEP 302
Yes
Initiate a reverse link intergenerational hard handoff.
STEP 304

FIGURE 8a

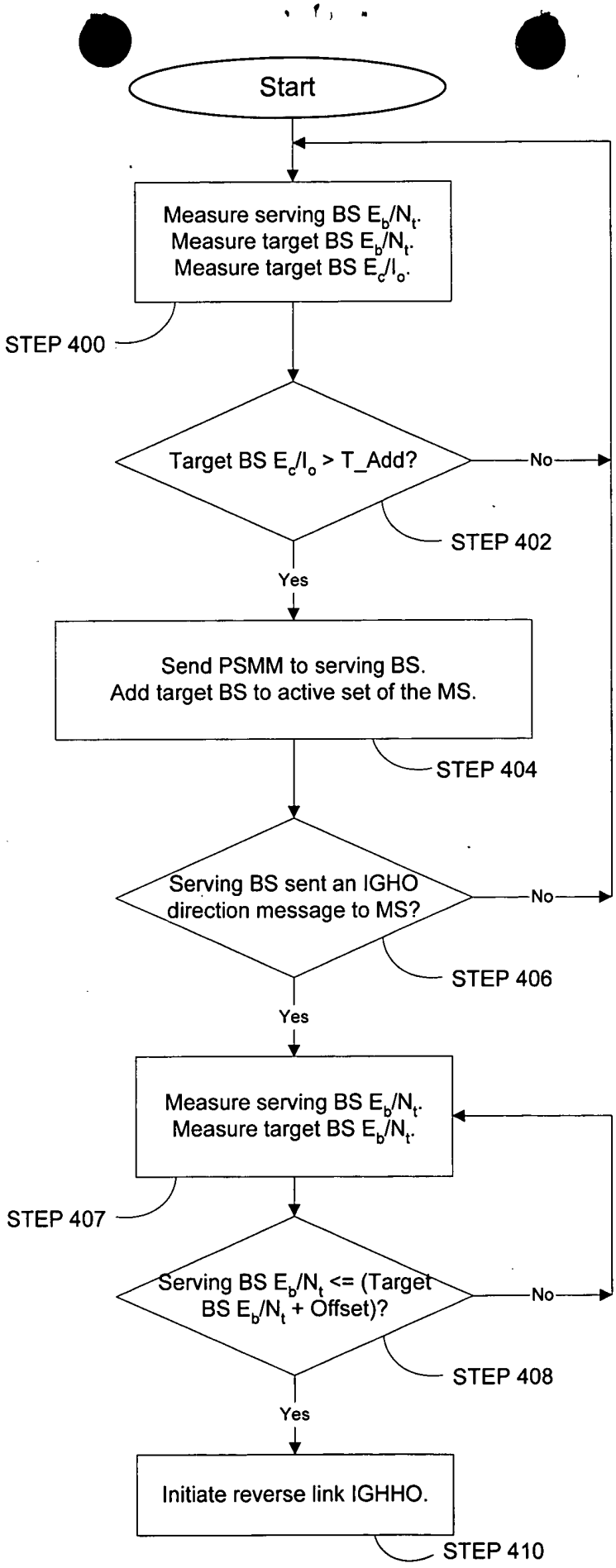
Start
Measure serving BS $E_b/N_t$.
Measure target BS $E_b/N_t$.
Measure target BS $E_c/I_o$.
STEP 400
Target BS $E_c/I_o$ > T_Add?
No
STEP 402
Yes
Send PSMM to serving BS.
Add target BS to active set of the MS.
STEP 404
Serving BS sent an IGHO direction message to MS?
No
STEP 406
Yes
Measure serving BS $E_b/N_t$.
Measure target BS $E_b/N_t$.
STEP 407
Serving BS $E_b/N_t$ <= (Target BS $E_b/N_t$ + Offset)?
No
STEP 408
Yes
Initiate reverse link IGHHO.
STEP 410

FIGURE 8b